



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,294	10/27/2003	David C. McClure	03-C-006	3951
7590 12/16/2005			EXAMINER	
Lisa K. Jorgenson STMicroelectronics, Inc. 1310 Electronics Drive Carrollton, TX 75006-5039			LAXTON, GARY L	
			ART UNIT	PAPER NUMBER
			2838	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,294

Applicant(s)

MCCLURE ET AL.

Examiner

Gary L. Laxton

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 16-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1,7-11,16-18 and 20-24 is/are rejected.
- 7) ☒ Claim(s) 2-6 and 25-27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, 7, 8, 10, 11, 16-18 and 20-24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 9 recites the limitation "the supply input" in 11. There is insufficient antecedent basis for this limitation in the claim. Line 2 recites a supply input and line 9 recites a supply input. It is unclear which supply input is being referenced.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 7, 8, 10, 11, 16-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsuda et al (US 6,404,076).

Matsuda et al disclose regulator (100), enable input (figure 6: ON/OFF), the regulator selectively provides an output at a current level and regulated voltage level; first and second unregulated supply inputs (Vin1, Vin2); compare circuitry (121-123); and, switching circuitry (113, 114, 117, 118) responsive to the compare circuitry for applying either the first or second unregulated supply voltage. The regulator comprises a transistor (11), coupled to the supply input and the supply output to provide the current level to the output. The switching circuitry comprises a transistor coupled to the first or second supply voltage (113 or 114). Bias circuitry (10).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda et al (US 6,404,076).

Matsuda et al, figure 1, disclose a regulator (100), enable input (figure 6: ON/OFF), the regulator selectively provides an output at a current level and regulated voltage level; first and second unregulated supply inputs (Vin1, Vin2); compare circuitry (121-123); and, switching

circuitry (113, 114, 117, 118) responsive to the compare circuitry for applying either the first or second unregulated supply voltage.

Furthermore, Matsuda et al, figure 6, further disclose a second voltage regulator having a supply input; an enable input and a supply output, the second voltage regulator receiving the common unregulated supply voltage at the supply input and providing at the supply output thereof a regulated voltage at up to a second predetermined current level when enabled , the supply output of the first voltage regulator being coupled to the supply output of the second voltage regulator.

However, Matsuda et al does not disclose the compare and selection circuit of figure 1 with the plurality of regulators in figure 6.

Matsuda et al do still teach a selection circuit (612, 613) with the plurality of regulators in figure 6.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the selection circuit of figure 1 with the plurality of regulators in figure 6 in order to provide excellent efficiency and also to implement a reduction of consumed power and a suppression of temperature increases of the apparatus as taught by Matsuda et al (col. 6 lines 33-40).

Allowable Subject Matter

8. Claim 19 is allowed.

9. Claim 2-6 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 9 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

11. The following is a statement of reasons for the indication of allowable subject matter:

Claims 2-6; prior art fails to disclose or suggest, inter alia, a second voltage regulator having a supply input coupled to the common unregulated supply voltage; an enable input responsive to the compare circuitry output, the second voltage regulator selectively providing a second predetermined current level at a regulated voltage based upon the common unregulated supply voltage, the first supply output of the first voltage regulator being coupled to the second supply output of the second voltage regulator.

Claim 9; the reasons for allowance remain the same as stated in the previous office action dated 6/23/2005.

Claim 19; the reasons for allowance remain the same as stated in the previous office action dated 6/23/2005.

Claims 25 and 26; prior art fails to disclose or suggest, inter alia, a compare circuit having an input coupled to the first unregulated supply voltage, for generating a signal at an output of the compare circuit, the output of the compare circuit being coupled to the enable input of the first voltage regulator and to control the operation of the switching circuit.

Claim 27; prior art fails to disclose or suggest, inter alia, a compare circuit, the output of the compare circuit being coupled to the enable inputs of the first and second voltage regulators so alternately enable the regulators and further coupled to control the operation of the switching circuit to alternately select the first and second unregulated supply voltages as the common unregulated supply voltage.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

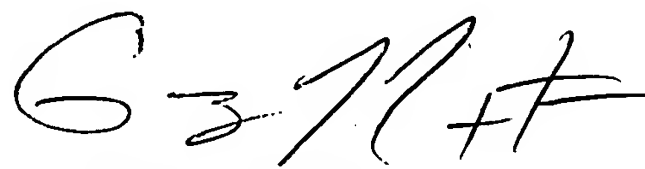
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gary L. Laxton whose telephone number is (571) 272-2079. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Easthom Karl can be reached on (571) 272-1989. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Gary L. Laxton
Primary Examiner
Art Unit 2838

12/12/2005